

FIG. 1a
(PRIOR ART)

```

/* Normal update logic */
update_flag = FALSE
if (  $\mu(m) \leq \text{UPDATE\_THLD}$  ) {
    update_flag = TRUE
    update_cnt = 0
}

/* Forced update logic */
else if ( (  $E_w(m) > \text{NOISE\_FLOOR\_DB}$  ) and (  $\Delta_E(m) < \text{DEV\_THLD}$  ) ) {
    update_cnt = update_cnt + 1
    if ( update_cnt  $\geq$  UPDATE_CNT_THLD )
        update_flag = TRUE
}

/* "Hysteresis" logic to prevent long-term creeping of update_cnt */
if ( update_cnt == last_update_cnt )
    hyster_cnt = hyster_cnt + 1
else
    hyster_cnt = 0
last_update_cnt = update_cnt
if ( hyster_cnt > HYSTER_CNT_THLD )
    update_cnt = 0

```

FIG. 1b
(PRIOR ART)

```

/* Set or reset modify flag */
index_cnt = 0
for ( i = NM to Nc - 1 step 1 ) {
    if (  $\sigma_q(i) \geq \text{INDEX\_THLD}$  )
        index_cnt = index_cnt + 1
}
if ( index_cnt < INDEX_CNT_THLD )
    modify_flag = TRUE
else
    modify_flag = FALSE

```

```

/* Modify the SNR indices to get  $\{\sigma'_q\}$  */
if ( modify_flag == TRUE )
    for ( i = 0 to Nc - 1 step 1 )
        if ( (  $\mathcal{U}(m) \leq \text{METRIC\_THLD}$  ) or (  $\sigma_q(i) \leq \text{SETBACK\_THLD}$  ) )
             $\sigma'_q(i) = 1$ 
        else
             $\sigma'_q(i) = \sigma_q(i)$ 
else
     $\{\sigma'_q\} = \{\sigma_q\}$ 

```

```

/* Limit  $\{\sigma'_q\}$  to SNR threshold  $\sigma_{th}$  */
for ( i = 0 to Nc - 1 step 1 )
    if (  $\sigma'_q(i) < \sigma_{th}$  )
         $\sigma''_q(i) = \sigma_{th}$ 
    else
         $\sigma''_q(i) = \sigma'_q(i)$ 

```

FIG. 1c
(PRIOR ART)

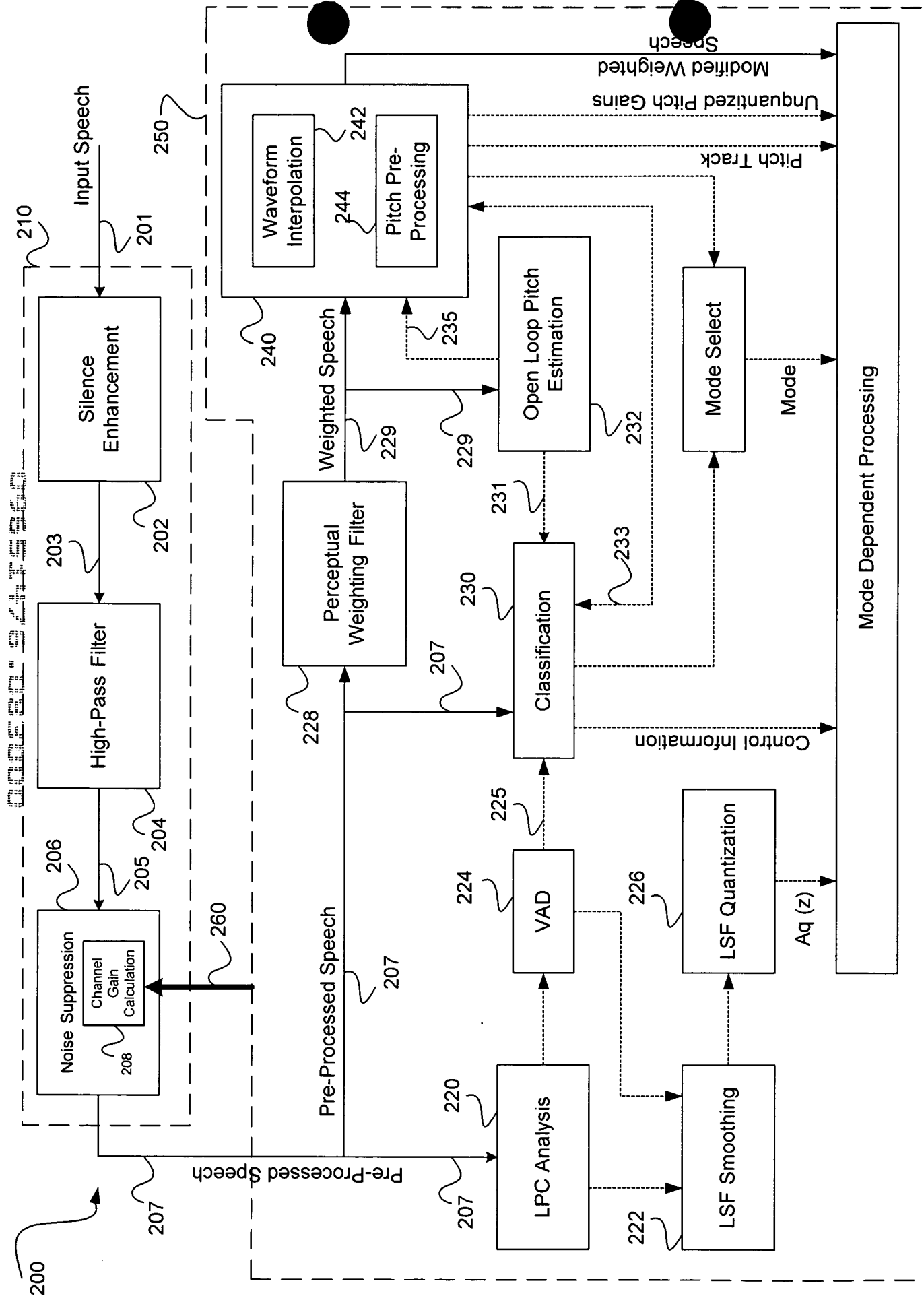


Figure 2

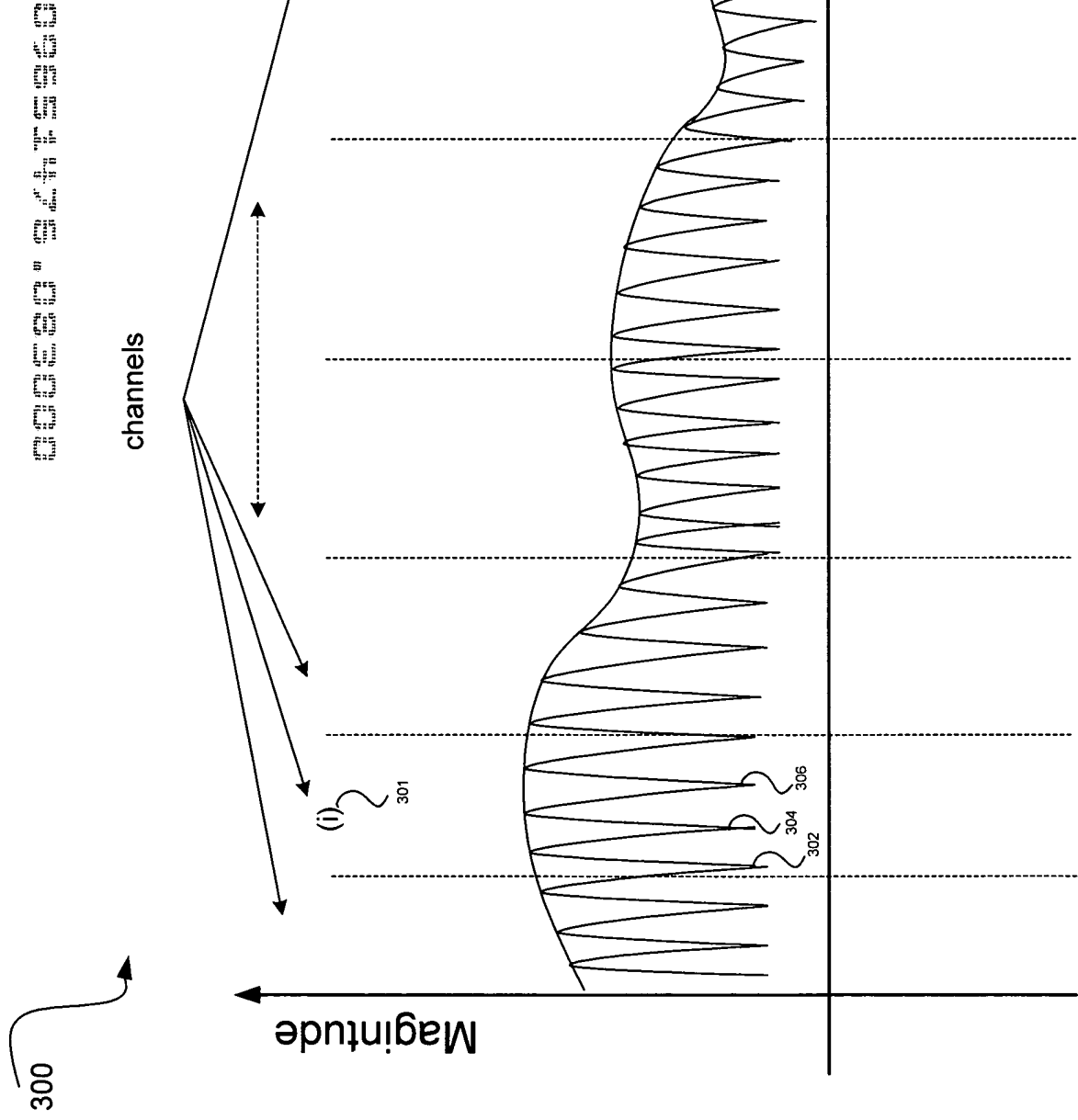
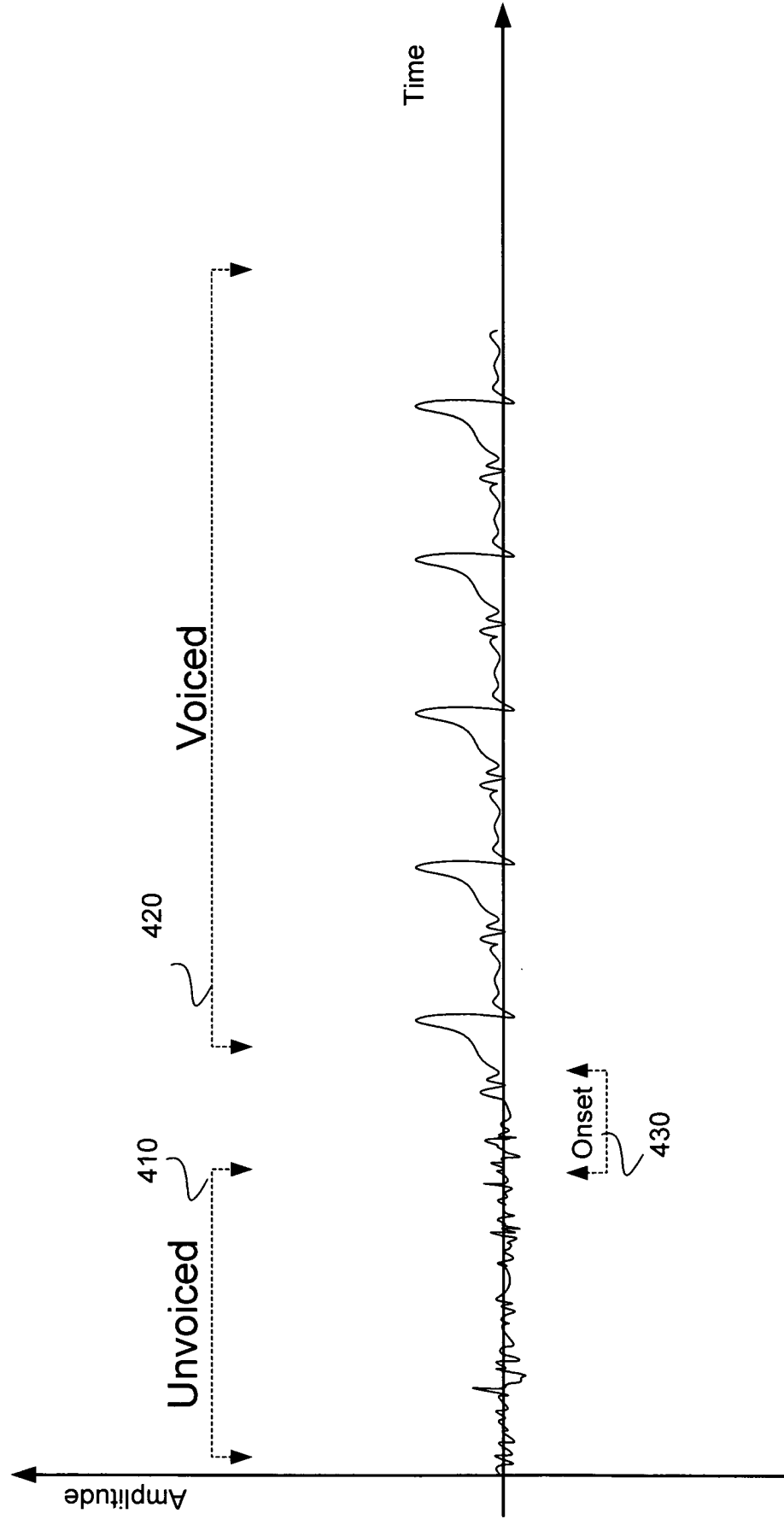


Figure 3

400



Unvoiced

Voiced

Time

Figure 4